Acid-base quiz REVIEW Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Define Acid: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Define Base: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. List 3 or more properties of each:
   1. Acids: b. Bases:
4. What is the pH scale? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. List 2 indicators (**not listed below**) and describe what each specifically tells you:
6. If you have an unknown substance that turns Methyl Orange Yellow and Bromthymol Blue Yellow, what is the range of pH values it must fall between? \_\_\_\_\_\_\_\_\_\_\_\_\_
7. Determine what color each of the following pH values would turn in the presence of the indicators listed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| pH | Phenolpthalein | Methyl orange | BromPHENOL blue | Bromcresol PURPLE |
| 1 |  |  |  |  |
| 4 |  |  |  |  |
| 7 |  |  |  |  |
| 10 |  |  |  |  |
| 14 |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Color 1 (pH range) | Color 2 (pH range) | Color 3 (pH range) |
| Phenolphthalein | Colorless (below 8) | Pink (above 8) | None |
| Methyl orange | Orange (below 3) | Yellow (above 3) | None |
| Bromthymol blue | Yellow (below 6) | Green (between 6 and 7.5) | Blue (above 7.5) |
| Blue litmus paper | Pink (below 7) | Blue (above 7) | None |
| Pink litmus paper | Pink (below 7) | Blue (above 7) | None |
| Thymol blue | Red (below 1.5) | Yellow (above 1.5) | None |
| Congo red | Blue (below 3) | Red (above 3) | None |
| Alizarin yellow | Colorless (below 10) | Yellow (above 10) | None |
| Bromcresol purple | Yellow (below 5.5) | Purple (above 5.5) | None |
| Bromphenol blue | Yellow (below 3) | Green (between 3.1 and 4.4) | Blue above 4.5 |